Relation between socioeconomic status, employment, and health during economic change, 1973-93

Mel Bartley, Charlie Owen

Abstract

***Objective*—To investigate the association between the national unemployment rate and class differences in the relation between health and employment during the period 1973-93.**

***Design*—Data from general household surveys, 1973-93. Comparison of rates of employment, unemployment, and economic inactivity among those with and without limiting longstanding illness in different socioeconomic groups and how these varied over 20 years.**

***Subjects*—All men aged 20-59 years in each survey between 1973 and 1993.**

***Main outcome measures*—Change over time in class specific rates of employment, unemployment, and economic inactivity in those with and without limiting longstanding illness.**

***Results*—Men in socioeconomic groups 1 and 2 with no longstanding illness experienced little decrease in their chances of being in paid employment as the general unemployment rate rose. Those most affected were men in manual groups with limiting longstanding illness. The likelihood of paid employment was affected far less by such illness in non-manual than in manual groups. In group 1 about 85% of men with such illness were in paid employment in 1979 and 75% by 1993; in group 4 the equivalent proportions were 70% and 40%. In men in manual groups with limiting longstanding illness there was no sign of employment rates rising again as the economy recovered.**

***Conclusion*—Socioeconomic status makes a large difference to the impact of illness on the ability to remain in paid employment, and this impact increases as unemployment rises. Men with chronic illness in manual occupations were not drawn back into the labour force during the economic recovery of the late 1980s.**

Introduction

During the period 1979-86 unemployment in the United Kingdom rose from just over 1 million to over 3 million. This increase peaked in 1986, according to official figures.[1] Unemployment continued to fall until 1989 to a "low" of 1.6 million in early 1990 before rising again. The fall in unemployment, however, was not accompanied by an equal increase in employment. There was, at the same time, a rapid increase in the numbers of men economically inactive due to disability or permanent sickness,[2] which does not seem to be reflected in other indices of population health such as mortality or specific forms of morbidity.[3,4] As unemployment rose in the 1980s its impact fell disproportionately on manual workers.[5] We examined trends in full time employment, unemployment, and economic inactivity due to permanent sickness or early retirement between 1973 and 1993 in different socioeconomic groups and compared the experience of those with and without limiting longstanding illness.

Subjects and methods

SAMPLE

The general household survey is a sample survey of households in Great Britain. From 1971 it has been conducted annually by the Office of Population Censuses and Surveys (now known as the Office for National Statistics). The size of the study has been reduced, but in 1988 it sampled about 10 000 households, comprising some 25 000 people. More detail of the survey is given in the annual reports from OPCS and in Dale *et al.*[6] Data from the survey from 1973 onwards are available for secondary analysis from the data archive of the Economic and Social Research Council.

SOCIOECONOMIC STATUS

We used an adaptation of the registrar general's classification of socioeconomic groups. This classification consisted of 15 categories which we collapsed into four: socioeconomic group 1 consisted of professional and managerial workers (original categories 1 to 4 and 13); socioeconomic group 2 intermediate and junior non-manual workers (original groups 5 and 6); socioeconomic group 3 skilled manual workers and foremen (original groups 8, 9, 12, and 14); and socioeconomic group 4 semiskilled, personal service, and unskilled manual workers (groups 7, 10, 11, and 15).

HEALTH STATUS

Each year (except 1977 and 1978) an identically worded question was asked of survey respondents on whether the respondent suffered from a longstanding illness. Respondents who replied in the affirmative to this question were also asked whether the illness limited what they could do in any way. The 1991 census also contained a similar, though not identical, question on limiting longstanding illness. For reasons of comparability with the census we used the "limiting" category of illness.

EMPLOYMENT STATUS

The general household survey collects detailed information on employment status. We coded employment status consistently into three categories: employed, unemployed, and inactive. The employed group included only those who reported being in paid work in the past seven days, including self employment, and either full or part time. The unemployed group consisted of those who were not in paid work but were looking for work or intending to look for a job but prevented by temporary sickness or injury or who were waiting to take up a job. The inactive were those who were neither in work nor looking for work but who were permanently unable to work or who had already taken retirement; this group also included a tiny number of men described as keeping house. All full time students and those on training schemes or courses were excluded from the analysis as they do not fall into one of the three defined categories. This definition of "unemployment"

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is not the same as the official definition reflected in monthly labour market statistics, which includes only those who are registered as unemployed and in receipt of benefit. There will be some "unemployed" men in the general household survey who would not be included in an official count.

We compared employment rates for men between socioeconomic groups, with and without longstanding illness. Changes in these rates were examined for a period when major economic change was taking place during 1973 to 1993. The analysis was confined to men aged 20 to 59 inclusive; this age restriction excluded men at either end of their normal working lives (in Britain) to avoid distortions that their inclusion might have caused. It excludes the younger ages, when many men are continuing full time education, because participation in education beyond the compulsory school leaving age is related to social class. Inclusion of this age group might distort the social class comparisons. Some occupations have retirement ages for men below 65, and inclusion of these in the analysis might distort the comparisons between those with and without a limiting longstanding illness.

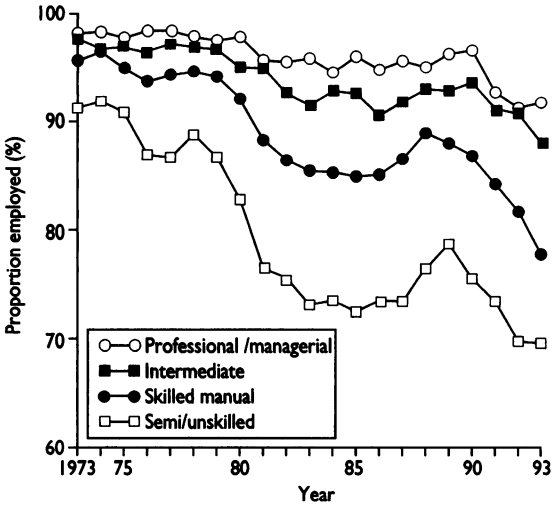

Fig 1—*Proportions employed according to socioeconomic group (data from general household survey)*

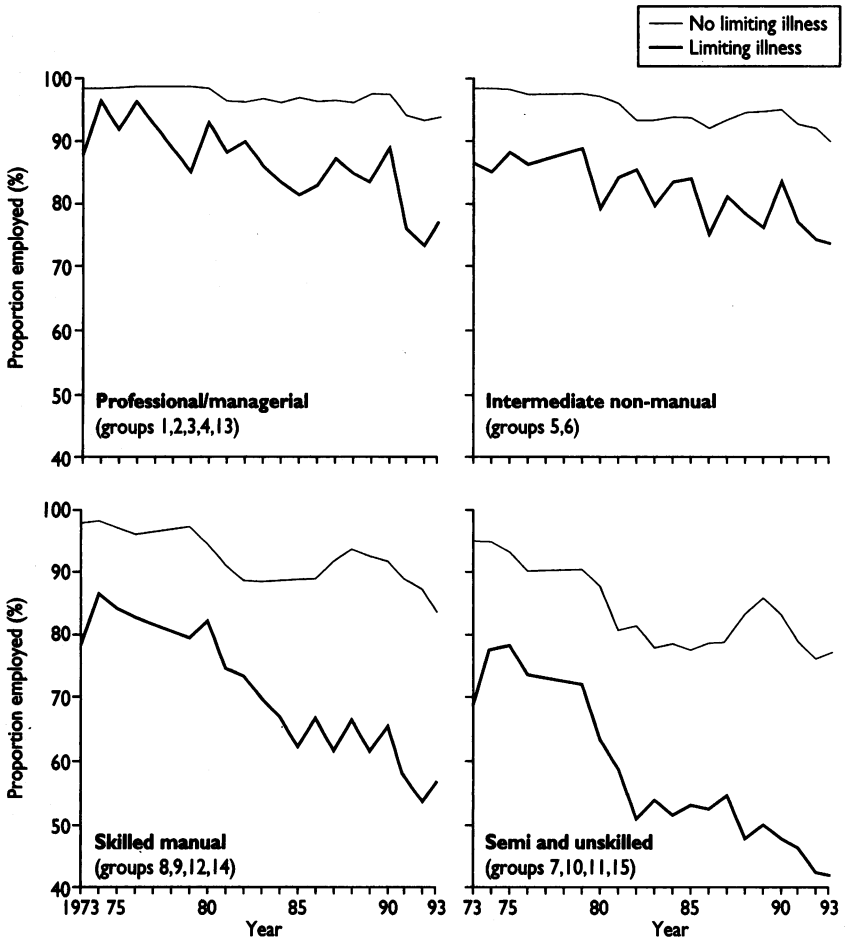

Fig 2—*Proportions employed according to limiting longstanding illness and socioeconomic group*

Results

For each year from 1973 to 1993 we examined what proportion of men with and without a limiting longstanding illness, as defined by the general household survey, were in full or part time paid employment for each of the four socioeconomic groups. Similarly we examined the proportions of those who were defined as unemployed and those defined as inactive.

EMPLOYMENT RATES

Figure 1 shows the trend in employment rates by socioeconomic group for all men aged 20 to 59 in the general household survey over the period considered here. It is clear that employment rates are related to socioeconomic group, with those men in professional and managerial occupations having the highest employment rates and those in semiskilled and unskilled occupations having the lowest. The differences increase over time, although the trends are similar. In each socioeconomic group there is a period of relatively high and stable employment rates, which begin to fall from about 1979-80; from 1983 to 1986 rates of employment remain low, then recover a little until about 1989, when they fall sharply again. These trends are seen most clearly in socioeconomic group 4.

Figure 2 shows employment rates by socioeconomic group, distinguishing men with and without a limiting longstanding illness.

CHANGES IN EMPLOYMENT RATES BY SOCIOECONOMIC GROUP: HEALTHY MEN

The overall fall in employment rates had relatively little impact on healthy men in socioeconomic group 1 (professional and managerial). In 1979 the employment rate for this group was 99%, and at its lowest it fell to 93% in 1992. Healthy men in socioeconomic group 2 (intermediate and junior non-manual) had an employment rate of 98% in 1979, which fell to a minimum 90% in 1993. The healthy men among skilled manual workers in socioeconomic group 3 had an employment rate of 97% in 1979, which fell to 88% in 1983 but rose again to 93% in 1988; between 1989 and 1993 the employment rate for this group fell again to 84%. Finally, healthy men in socioeconomic group 4 (semiskilled and unskilled manual) had an employment rate of 90% in 1979, which fell to 78% in 1985, rose to 86% in 1989, and fell again to a new low of 76% by 1992. The fall in employment rates for men without a limiting longstanding illness was therefore more obvious in the manual socioeconomic groups, which were already experiencing lower rates of employment in 1979.

CHANGES IN EMPLOYMENT RATES BY SOCIOECONOMIC GROUP: ILL MEN

Not surprisingly, for every year and in each socioeconomic group the employment rate for men with a limiting longstanding illness was lower than for men without such an illness. Within each socioeconomic group the trends were similar to those for "healthy" men (those without limiting longstanding illness)—that is,

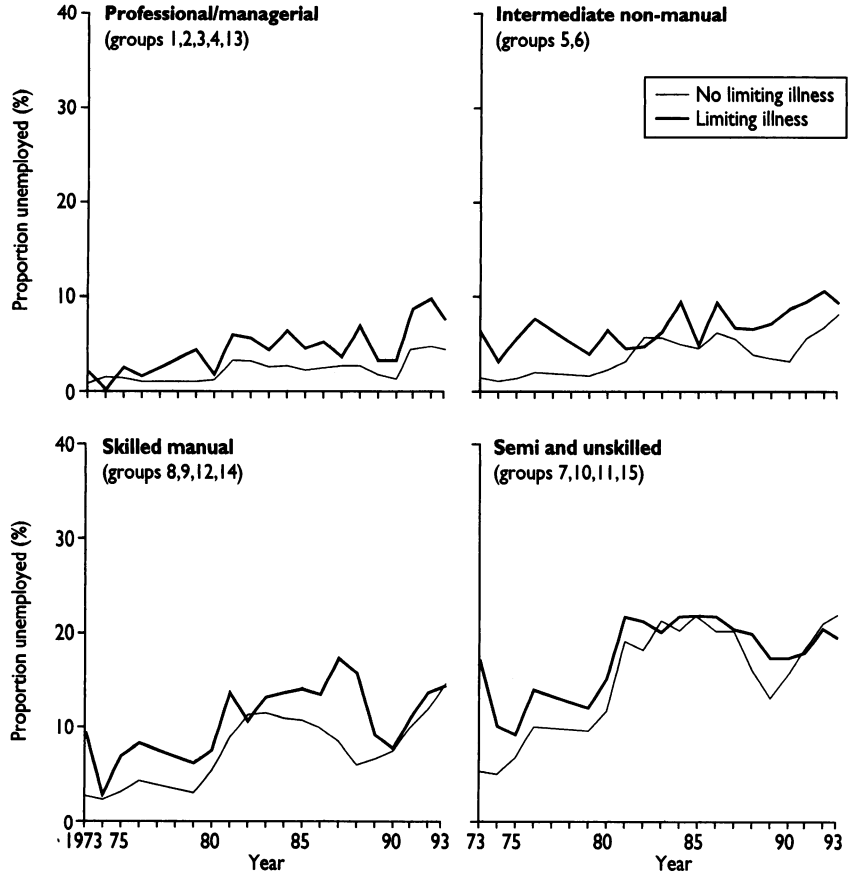

Fig 3—*Proportions unemployed according to limiting longstanding illness and socioeconomic group*

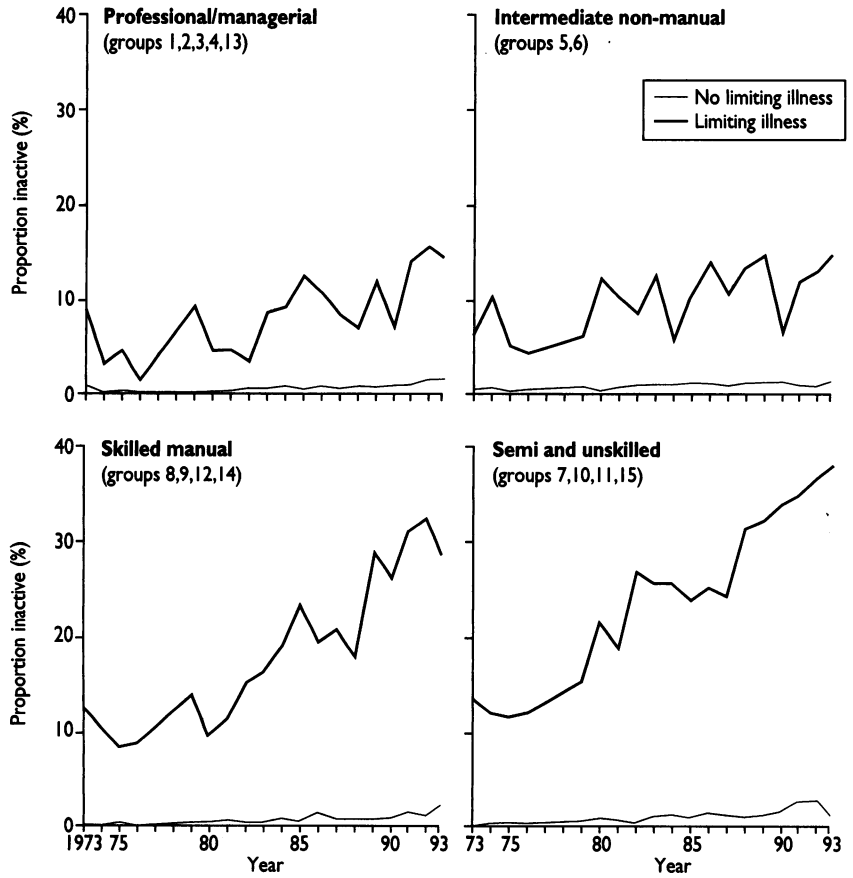

Fig 4—*Proportions inactive according to limiting longstanding illness and socioeconomic group*

there was a fall in rates of employment over the period. What is notable is that the fall was so much greater within the manual socioeconomic groups. Also, among those with a limiting longstanding illness there was far less evidence of a rise in employment rates between 1986 and 1990. In 1979, 72% of men in socioeconomic group 4 with limiting longstanding illness were in paid employment; this fell to 42% in 1993. The minimum employment rate for men with limiting longstanding illness in socioeconomic group 1 was 76% in 1991. This had fallen from 89%, reflecting the greater impact of the 1990s recession on professional groups; it was, however, followed by a small rise.

UNEMPLOYMENT RATES

Figures for unemployment rates are shown in figure 3. It might be expected that unemployment rates would simply be the complement of employment rates, yet this is by no means the case. Generally the separation between the trends for men with and without limiting longstanding illness is not present when we look at unemployment rates. Whereas figure 2 showed that the degree of difference between ill and healthy men is inversely related to socioeconomic group for employment rates—the higher the socioeconomic group the lower the difference in rates—this is not so for the risk of unemployment. Indeed, the unemployment rates in socioeconomic group 4 for men with and without a longstanding illness were almost indistinguishable. Although a man in socioeconomic group 4 with a chronic illness is less likely to be employed than a man without such an illness, he is no more likely to be unemployed.

RATES OF ECONOMIC INACTIVITY

The gap between employment and unemployment was made up by men who are not economically active (either in employment or seeking work), mostly permanently sick, and early retired. Trends for this group, called here economically inactive, are shown in figure 4.

Few healthy men are economically inactive. Rates of inactivity among men with chronic limiting illness are shown to vary by socioeconomic group. In professional and managerial occupations this rate rose from around 4% in 1980, 1981, and 1982 to 16% in 1992. In socioeconomic group 2 it rose from 7% in 1979 to 15% in 1993. In the manual socioeconomic groups the rise in the inactivity rate of men with limiting illness was far greater, from 10% in 1980 to 33% in 1992 among those in socioeconomic group 3 and from 15% to 38% in socioeconomic group 4 during the same period.

Discussion

A HEALTHIER WORKFORCE?

These findings are relevant to the understanding of social variations in health and the relation between unemployment and health. The longitudinal study of the Office of Population Censuses and Surveys (Office for National Statistics) has shown that the "healthy worker effect" visible in occupational health studies is less strong in non-manual than manual workers.[7-9] Results presented here confirm that this effect operates more strongly on men in manual occupations: a man has to be "healthier" to remain employed in a manual rather than in a managerial, professional, or clerical occupation.[10-13] These data also indicate that as jobs get harder to come by the active labour force is increasingly selected: to have a job a person had to be in better health in 1993 than in 1973.

The longitudinal study has also shown that nearly all men without work whose health is sufficiently poor to affect their short term risk of mortality do not register as "unemployed and actively seeking work" but rather join the ranks of the "permanently sick."[11,12] Results reported

here confirm that limiting longstanding illness is not strongly associated with unemployment but rather with economic inactivity.

ILLNESS BEHAVIOUR

These results show that when there is the opportunity for employment most men with chronic illness continue to work. This is consistent with epidemiological studies of the clinical iceberg, which show that many people function quite normally despite having moderate or even relatively severe levels of disease.[14-17] When jobs are scarce, however, long term sickness may carry less of a stigma than long term unemployment and also slightly higher benefits, though these are still only a very small proportion of the average wage (conditions for eligibility were tightened by the replacement of invalidity benefit by incapacity benefit in 1995, outside the time period covered in this paper). General practitioners and benefit officials may quite justifiably classify many unable to find work at a time of high unemployment as "permanently sick": their health has become a barrier to employment because of the state of the labour market.

A danger of bias in our results would arise if employed men in non-manual occupations were over-reporting limiting longstanding illness. Some studies have indicated that the meaning of survey questions on health and the answers they receive may vary widely between different social groups.[18 19] If men in socioeconomic groups 1 and 2 were systematically defining themselves as having a limiting longstanding illness at a far less severe level of objective disease than men in groups 3 and 4, similar results could be expected to those reported here. In this case it would not be the man's occupation which allowed him to continue working when ill but the fact that the illness was less severe. There is some evidence that middle class men regard themselves as ill enough to require medical attention at a lower "threshold" than working class men, who may also be suffering from more severe types of chronic illness or from more than one.[20] This can be investigated by using data from the 1989 general household survey. In this year the survey contained a set of questions on the specific diseases experienced by those who reported a longstanding illness, making it possible to estimate whether those in lower socioeconomic groups reporting themselves as "limited by illness" might be considered to have medically less serious conditions. After adjustment for age, heart disease was slightly less prevalent in men in professional occupations (a standardised illness ratio of 81) than in men in unskilled manual occupations (a standardised illness ratio of 99). In contrast, the standardised illness ratio for musculoskeletal complaints, a medically less serious diagnosis, was 63 in professional men compared with 126 in unskilled men.

It does not seem to be the case that men in professional and managerial occupations who define themselves as having a limited longstanding illness are affected by less serious conditions than men who so define themselves in the unskilled manual group. In addition, it is most unlikely that class differences in illness behaviour could account for the observed widening difference over time in the likelihood of remaining in paid employment between men in manual and non-manual occupations who report limiting longstanding illness.

Key messages

- Most men with limiting longstanding illness continue to work
- Those in non-manual occupations are more likely than manual workers to remain in work if they have a limiting illness
- As unemployment rose in the 1980s manual workers with limiting illness were worst affected
- Only healthy men experienced a recovery in employment rates as the economic situation improved
- In the 1990s recession, non-manual workers with chronic illness seem to have been less protected against being "shaken out" of the labour force

CONCLUSION

Security of employment during periods of less than good health and in middle to later life as strength wanes is a little discussed aspect of social inequality, although it may be one of the most important for health. The economic policies of the 1980s did indeed produce a "leaner, fitter workforce," though this was more the case

Appendix

Table 1A—*Base numbers with and without limiting longstanding illness, by socioeconomic group*

	Professional/managerial		Intermediate non-manual		Skilled manual		Semiskilled and unskilled	
Year	No illness	Illness	No illness	Illness	No illness	Illness	No illness	Illness
1973	1505	96	1183	120	2992	302	1406	227
1974	1550	156	1063	162	2801	386	1245	236
1975	1572	183	1203	199	3070	467	1393	262
1976	1581	159	1196	177	2852	511	1337	277
1979	1513	171	1041	163	2462	458	1090	273
1980	1460	202	1061	177	2529	526	1074	269
1981	1410	176	1157	161	2664	495	1223	290
1982	1191	151	861	118	2065	358	937	222
1983	1227	145	835	150	2066	416	1025	245
1984	134	146	883	12	1938	343	930	211
1985	1486	157	893	132	1927	334	914	227
1986	1519	196	907	125	2005	392	829	196
1987	1554	249	860	165	1980	386	897	233
1988	1631	224	862	123	1875	373	790	199
1989	1634	189	871	119	1900	34	816	206
1990	1422	224	810	153	1716	371	688	193
1991	1527	165	906	121	1917	328	829	179
1992	1523	190	933	117	1779	345	806	198
1993	1431	215	875	151	1596	409	759	193

Source: General household survey, 1973-93.

for manual than for managerial or clerical work. Material standards of living tend to decline after some years outside the paid labour force, whether this is defined as "unemployment," early retirement, or invalidity,[21] and the implications of this can be no less serious for those with health problems than for those without. Increased unemployment and job insecurity in the managerial and professional occupations may soon cause the implications of the "flexible labour market" for health and welfare to be more widely noticed and debated.

The data for the general household surveys was made available by the Office of Population Censuses and Surveys (Office for National Statistics) through the Economic and Social Research Council's data archive at the University of Essex. We thank the Office for National Statistics for making these data available and the data archive for supplying the data. Data were supplied in the form of SPSS and SIR/DBMS datasets. For the years 1973 to 1982 these datasets were prepared by GN Gilbert, A Dale, and S Arber from the University of Surrey. For the years 1983 onwards the datasets were in the form supplied by the Office of Population Censuses and Surveys. Data are used by permission of the comptroller of HMSO. Those who carried out the original collection and analysis of the data bear no responsibility for its further analysis and interpretation.

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Conflict of interest: None.

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Inequalities in self rated health in the 1958 birth cohort: lifetime social circumstances or social mobility?

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See editorial by Dahlgren and p 445

Abstract

***Objective*—To investigate explanations for social inequalities in health with respect to health related social mobility and cumulative socioeconomic circumstances over the first three decades of life.**

***Design*—Longitudinal follow up.**

***Setting*—Great Britain.**

***Subjects*—Data from the 1958 birth cohort study (all children born in England, Wales, and Scotland during 3-9 March 1958) were used, from the original birth survey and from sweeps at 16, 23, and 33 years.**

***Main outcome measures*—Subjects' own ratings of their health; social differences in self rated health at age 33.**

***Results*—Social mobility varied by health status, with those reporting poor health at age 23 having higher odds of downward mobility than of staying in same social class. Men with poor health were also less likely to be upwardly mobile. Prevalence of poor health at age 33 increased with decreasing social class: from 8.5% in classes I and II to 17.7% in classes IV and V among men, and from 9.4% to 18.8% among women. These social differences remained significant after adjustment for effects of social mobility. Health inequalities attenuated when adjusted for social class at birth, at age 16, or at 23 or for self rated health at age 23. When adjusted for all these variables simultaneously, social differences in self rated health at age 33 were substantially reduced and no longer significant.**

***Conclusions*—Lifetime socioeconomic circumstances accounted for inequalities in self reported health at age 33, while social mobility did not have a major effect on health inequalities.**

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Introduction

Commenting on systematic variations in mortality and morbidity across social groups in the United Kingdom, a recent Department of Health report concludes: "It is likely that cumulative differential exposure to health damaging or health promoting physical and social environments is the main explanation for observed variations in health and life expectancy, with health related social mobility, health damaging or health promoting behaviours, use of health services, and genetic or biological factors also contributing."[1] The report therefore recognises the role of health related social mobility (whereby unhealthy people drift down the social scale and healthy people drift up) but places this as secondary to cumulative differential exposures.

Investigating cumulative differential exposure is not without its challenge. One particular problem is the lack of appropriate health measures to indicate poor health at ages when mortality is uncommon. None the less, it is increasingly recognised that self rated health provides a useful measure of health status because it is associated with fitness[2] and morbidity[3] and predicts mortality.[4-7] Thus, many studies of social differences in health focus on this measure.[8 9]

We investigated explanations for social inequalities in self rated health among 33 year olds in the 1958 birth cohort. We focused on the relative importance of health